

Thanks to funding from the LTSN Generic Centre 20 delegates were able to meet over two days at the impressive Gomersal Park Hotel, in the heart of West Yorkshire. They included teaching, careers and skills development staff from universities and higher education colleges, both senior and junior graduate staff from employers, and others with an interest in the employability of graduates. Their different perspectives on the employability agenda generated a lively and informative exchange of ideas and information. The agenda was ambitious and wide-ranging and included topics some of which could be the focus of a discussion forum in their own right in the future.

The stated aims and outcomes of the meeting were:

### **Aims**

- to exchange experience about the issue of employability within a bioscience context;
- to gather and compare information/data regarding how different departments are responding to the employability agenda;
- to compare current practice within bioscience units;
- to devise strategies for raising awareness in the biosciences of issues surrounding employability;

### **Outcomes**

- a better understanding of the current position across departments by participants;
- the harvesting of what works and what does not within a bioscience context;
- some guidelines for developing methods and policies for bioscience units/teachers;
- an account of the meeting which will provide a guide for LTSN in supporting bioscience departments in their employability.

Representatives brought with them a diversity of experience and a range of ideas about how to deal with employability issues. Individual speakers presented information about selected topics and a number of fruitful discussions, in groups and plenary, took place.

## **Monday 19 May**

### **Define employability in the context of teaching bioscience**

(small group discussion and plenary).

The definition to emerge from discussions was: "Employability is a combination of in-depth subject knowledge, work awareness, subject specific, generic and career management skills, and personal attributes and attitudes that enable a student to secure suitable employment and perform excellently throughout a career spanning a range of employers and occupations"

### **Demonstration of Employability Card Sort**

Professor Ian Hughes, LTSN Bioscience

Ian described how the Employability Card Sort can be used to help students to make career plans, to take control of their learning and personal development to position themselves to apply for the jobs they want, and to make successful applications. Designed to be visual and entertaining, it is expected that the student will make use of it in an on-going way throughout her/his university career. Each card is a prompt for action and offers information about how to take this forward. On completion of the Card Sort a report is generated that is essentially an action plan for the student. A big attraction for tutors is that it can be customised and a set of cards generated for a particular subject area. New cards can be authored and added. Active tutor encouragement and support will be required to ensure that students gain full benefit from the Card Sort. Ideally it should be embedded in the tutorial system. Students could be required to

use it at particular times, eg before or after work experience or a skills module. LTSN Bioscience can provide technical help to academic staff who want to use Card Sort.

### **To what extent is employability being integrated into the curriculum?**

(small group and plenary discussion based on the Employability Audit)

Professor Ian Hughes, LTSN Bioscience

Ian began this session with a description of the Employability Audit (<http://www.bioscience.heacademy.ac.uk/ftp/employability/empaudit.pdf>). It can help a department to clarify how employability can be developed in relation to a particular discipline and identify how far and in what area development should take place, whilst giving recognition to existing activities which are already contributing effectively. It is designed to help course teams choose the content and design of a course to better enhance employability, linking where appropriate with the Careers Service and other university agencies and initiatives. [Outcomes of discussion](#)

### **Delegate presentations:**

#### ***Biologists – who employs them?***

Dr Chris Newton, Careers Adviser, University of Leeds

Chris presented first destination data (ie collected six months after graduating) for bioscientists who graduated from the University of Leeds over the 2000 – 2002 period. For those who gained employment the top ten employers were identified and included a mix of those who might be expected to recruit bioscientists, eg pharmaceutical companies, and those who target graduates of all subjects, eg financial services. The extremely wide range of employer sectors employing bioscientists was exemplified by a list of employers including large and small, bioscience and generalist, and private and public sector. In a breakdown of the types of work undertaken, clerical work was marginally ahead of scientific, a function of the early nature of the first destination survey. The need for longitudinal surveys was identified and it was noted that HESA are planning this from 2002/3 on.

#### ***Employment in a large science based organisation***

Dr Martin Todd, Portfolio Manager, AstraZeneca Pharmaceuticals

Martin initially referred to why first degree graduates are attracted to work in industry, presenting both his own views and those from a 2002 survey, [Graduates in the Eyes of Employers](#), carried out by Park HR. After listing what his company is looking for in a new graduate, he gave a detailed description of the selection process an applicant to AstraZeneca would have to face. Likely to be one of the most challenging processes that a candidate might meet with any employer, it includes a web-based initial application, then first round interviews, and, if successful, an assessment centre comprising a number of selection elements. Although seeking a total of 100 graduates across all disciplines in 2003 it is sobering to learn that the number of vacancies for new graduate bioscientists is about 4 and the competition for these intense. In 2002, 351 candidates competed for a similar number. Finally, Martin described the induction and training courses, the skills/competencies and knowledge a graduate would be expected to acquire over the first 3 years, and staff performance and appraisal.

Martin handed out two papers designed to help tutors and students to better understand:

- How large companies employing bioscientists build upon and add to the knowledge and skills that graduates bring from their university courses – [view handout 1](#)
- How the appraisal of graduates during their first three years of employment is conducted and what is being appraised, ie the knowledge, skills and attributes that are being developed – [view handout 2](#)

These papers describe in detail the scientific knowledge, technical and personal skills, and personal attributes, that a typical large employer is looking for in graduate recruits. Tutors are offered guidance about how to use them with their students.

### ***Work Experience outside the laboratory and research field***

Dr Geoff Whiteley, Senior Lecturer and Year in Industry Co-ordinator, Department of Biology, University of Leeds.

Geoff described the Year in Industry scheme which was initially introduced for applied biology students and has now been expanded to include students from the whole of the School of Biology. The work experience must be paid and “linked” to biology or, in the case of joint honours students, to the other component of their programme. Interested students are selected for the scheme at the end of year 1 and are primed to apply for placements from the beginning of year 2. Although they have to locate suitable vacancies themselves, they are supported by their tutors in their applications and are encouraged to use the facilities of the Careers Centre. During their placements students are visited at least once by their tutors. Academic credit is given for the year and students can choose to work for a City and Guilds qualification. Although no systematic study of the benefits of the scheme to students have been carried out, Geoff finds that the students tend to have good academic outcomes and achieve good career starts. They approach their final year work with vigour and high motivation and are well-organised.

## **Tuesday 20 May**

### **Delegate presentations:**

#### ***Prebio: the developmental years***

Dr Andrew Ramsay, Senior Lecturer, Biological and Chemical Sciences, School of Science and Technology, Bell College

PreBio is an intensive 8-weeks programme that aims to equip new and recent bioscience graduates with the technical knowledge, technical and personal skills, and commercial and industrial awareness needed by employers within the Scottish biotechnology sector. It was set up in response to a 1997 study that identified skill shortages constraining biotechnology companies in Scotland and is delivered by a number of colleges throughout East and West Central Scotland, including Bell College. Graduates who successfully apply for the free programme have to support themselves but are guaranteed a job interview with one of over 60 recruiting biotech companies. 90% of successful leavers find relevant employment within 6 months.

#### ***Contribution of Profile, an FDTL Phase- 4 project, to student employability***

Dr Stephen Gomez, Faculty Placements Tutor, Faculty of Applied Sciences, University of the West of England

[Profile](#) is a web based system that will enable bioscience students on placement to record their learning experiences with support from placement tutors and employers. This will provide a framework for academic credit. Placements will be profiled and the experience broken down into “generic”, “specific” and “reflective” elements. Amongst the expected advantages of Profile are closer ties between students, tutors and employers. Initially the system will be used for bioscience placements with both pilot university groups and employers and then rolled out to all universities and eventually all subjects. When fully operational prospective employers will be able to search the skills database for suitable job applicants. A web site is under construction.

### **Employability – bioscience problems**

Professor Ian Hughes, LTSN Bioscience

Ian’s focus was on the academic bioscience community as defined by the somewhat diverse range of 22 disciplines served by the LTSN Bioscience Subject Centre. Based on a survey of pharmacology graduates in employment, a list of attributes required by employers was discussed in relation to the

extent to which new graduates possessed them. Communication skills were then considered in detail. This was followed by an objective and broad-ranging look at a number of problems which the bioscience community needs to address to respond to the employability agenda, not least the need for the attitudes of many academic staff to change.

### **Delegate presentations:**

#### ***The relevance of Medical Biochemistry (BSc Hons) and Master of Research (MRes) to working as a research scientist in the pharmaceutical industry***

Kathryn Owen, Research Bioscientist, AstraZeneca Research and Development Genetics

Kathryn gave a description of her BSc course at Birmingham, especially the technical content which she found to be stimulating and topical and with clear applications to medicine. More effective notification by campus careers of deadlines for work placements would have been helpful. She saw her MRes at Manchester as an aid to deciding whether to enter university research or industry. Having to take responsibility for her choices and technical work and the emphasis on good professional practice and the personal skills needed for effective science was welcome. The most challenging and eye-opening part of the course was her industrial research project with AstraZeneca and she joined the company after her master's course.

#### ***Biology doesn't pay***

John Horlock, Project Officer, LTSN Bioscience

With hindsight John felt that it would have been helpful to have more information about the real graduate job situation at the time of his transition from A-levels to university and throughout his studies in process biotechnology at Teesside University. His decision to study for an MA in computer science at Bradford University, a reaction to the difficult jobs market, gave the career direction he was seeking and this led to his current position at LTSN Bioscience. Although perhaps lacking sufficient careers guidance at Teesside the self-management and other softer skills that he developed there have been useful in his subsequent career.

#### **How can a bioscience department best steer the student experience to enhance employability?**

small group discussion and plenary

How can a bioscience department best steer the student experience to enhance employability?

The Forum groups made a number of proposals for consideration by a bioscience department. These were debated in plenary.

[Discussion outcomes](#)

#### **Ways in which LTSN Bioscience can support departments**

Professor Ed Wood, LTSN Bioscience

Ed led a short plenary discussion which covered actions that LTSN Bioscience intends to take leading on from the Forum (see also the report of the session Next steps for the Discussion Forum) and included more general suggestions from delegates. A Forum report, with links to presentations and discussion papers, will be placed on the LTSN Bioscience Employability web pages. A plea for a member of the bioscience community to come forward to take the on the coordinator role for an employability Special Interest Group was made. Considerable help and support would be available for this. It was emphasised that LTSN Bioscience was always receptive to ideas and suggestions. One suggestion generating lively debate was that CVs of bioscientists in graduate employment should be included in the employability web pages. Some delegates, especially those from the employer side, had concerns about this.